IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 14, 17, 18, 20, 22 and 26 in accordance with the following:

CLAIMS 1-13 CANCELED

14. (currently amended) A system for inserting Ethernet signals in an STM-N frame of synchronous digital hierarchy, comprising:

a decoder to receive an Ethernet signal and to perform data rate reduction of the Ethernet signal in generating a decoded output without frame detection;

a first multiplexer, coupled to said decoder, to form data words from the decoded output and associated monitoring information;

a unit, coupled to said first multiplexer, to form a first signal sequence with a predetermined bit length from the data words formed by said first multiplexer; and

a second multiplexer, coupled to said unit, to combine at least one first signal sequence and control and administration data for the STM-N frame.

15. (previously presented) The system as claimed in claim 14, wherein said first multiplexer forms data words with a data word length of 9 bits.

16. (previously presented) The system as claimed in claim 14, wherein said unit forms one of a contiguously concatenated signal and a virtually concatenated signal .

17. (currently amended) A system for recovering ~~Ethernet~~ encoded 8B/9B signals inserted into STM-N frames of synchronous digital hierarchy, comprising:

a first demultiplexer to form at least one first signal sequence;

a demapper, coupled to said first demultiplexer, to form an ~~Ethernet~~ 8B/9B signal having a reduced data rate;

a second demultiplexer, coupled to said demapper, to form data words and associated monitoring information; and

an encoder, coupled to said second demultiplexer, to form an ~~Ethernet~~ encoded 8B/9B signal.

18. (currently amended) A system for transmitting Ethernet signals, comprising:

a decoder to receive an Ethernet signal and to perform data rate reduction of the Ethernet signal in generating a decoded output without frame detection;

a first multiplexer, coupled to said decoder, to form data words from the decoded output and associated monitoring information;

a unit, coupled to said first multiplexer, to form a first signal sequence with a predetermined bit length from the data words formed by said first multiplexer;

a second multiplexer, coupled to said unit, to combine at least one first signal sequence and control and administration data for an STM-N frame;

a synchronous digital hierarchy transmission system, coupled to said second multiplexer, to transmit data in the STM-N frame;

a first demultiplexer, coupled to the synchronous digital hierarchy transmission system to form the at least one first signal sequence from the STM-N frame;

a demapper, coupled to said first demultiplexer, to form a reduced data rate Ethernet signal;

a second demultiplexer, coupled to said demapper, to reform the data words and the associated monitoring information; and

an encoder, coupled to said second demultiplexer, to form a recovered Ethernet signal.

19. (previously presented) The system as claimed in claim 18, further comprising:

a scrambler coupled between said first multiplexer and said mapper; and

a descrambler coupled between said first demultiplexer and said second demultiplexer.

20. (currently amended) A method for inserting Ethernet signals into an STM-N frame of synchronous digital hierarchy, comprising:

reducing a data rate of the Ethernet signal without detecting frames;

combining data and associated monitoring information of the Ethernet signal after data rate reduction, into data words to produce a first signal sequence with a specific bit length; and

forming an STM-N signal from at least one first signal sequence and control and administration data associated with an STM-N frame.

21. (previously presented) The method as claimed in claim 20, wherein the STM-N frame has a 9-bit structure, with 9 bits of user data placed synchronously in the STM-N frame.

22. (currently amended) ~~The~~ A method ~~as claimed in claim 20, wherein the~~ for inserting Ethernet signals into an STM-N frame of synchronous digital hierarchy, comprising:

reducing a data rate of an Ethernet signal;

combining data and associated monitoring information of the Ethernet signal after data rate reduction, into data words to produce a first signal sequence with a specific bit length, ~~is~~ broken down into four subgroups, starting with three subgroups, each beginning with a first 9-bit stuffing monitoring information item, and ending with a second stuffing monitoring information item and including at least two user data groups and blank information arranged between the first and the second stuffing monitoring information items; and

forming an STM-N signal from at least one first signal sequence and control and administration data associated with an STM-N frame.

23. (previously presented) The method as claimed in claim 22, wherein each user data group has 144 bits bundled in a group of 16 x 9 bits.

24. (previously presented) The method as claimed in claim 22, wherein each user data group is terminated by an item of the blank information.

25. (previously presented) The method as claimed in claim 22, wherein the first signal sequence has a fourth subgroup starting with a first stuffing information item and ending with a second stuffing information item, with additional user data and blank information arranged between the first and second stuffing information items.

26. (currently amended) A method for recovering ~~Ethernet~~ encoded 8B/9B signals inserted into STM-N frames of synchronous digital hierarchy, comprising:

extracting a first signal sequence from [[a]] an STM-N signal;

forming a reduced data rate ~~Ethernet~~ 8B/9B signal from the first signal sequence;

forming data words and associated control information from the reduced data rate ~~Ethernet~~ 8B/9B signal; and

forming an ~~Ethernet~~ encoded 8B/9B signal from the data words and ~~the~~ associated monitoring information.